

A. CLASSIFICATION OF SUBJECT MATTER IPC 7. G01M15/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

 $\begin{array}{ccc} \mbox{MinImum documentation searched (classification system followed by classification symbols)} \\ \mbox{IPC 7} & \mbox{G01M} & \mbox{F02D} \end{array}$ 

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## EPO-Internal

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 823 622 A (TOYOTA MOTOR CO LTD) 11 February 1998 (1998-02-11) abstract page 5, line 47 - page 7, line 36 claims 1,2,4 figure 3	1-8
Α .	US 5 809 969 A (DEGROOT KENNETH P ET AL) 22 September 1998 (1998-09-22) abstract claims	7
<b>X</b>	US 5 287 736 A (NAKAYAMA MASAAKI ET AL) 22 February 1994 (1994-02-22) abstract column 5, line 44 - line 57 column 14, line 13 - line 42 -/	1-3,6

X Further documents are listed in the continuation of box C.	Patent family members are listed in annex.
Special categories of cited documents:  A' document defining the general state of the art which is not considered to be of particular relevance  E' earlier document but published on or after the International filing date  L' document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  O' document referring to an oral disclosure, use, exhibition or other means  P' document published prior to the international filing date but later than the priority date claimed	<ul> <li>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</li> <li>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</li> <li>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</li> <li>"&amp;" document member of the same patent family</li> </ul>
Date of the actual completion of the international search  26 February 2004	Date of mailing of the international search report 05/03/2004
Name and mailing address of the ISA  European Patent Office, P.B. 5818 Patentlaan 2  NL – 2280 HV Rijswijk  Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  Fax: (+31-70) 340-3016	Authorized officer Trotereau, D



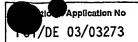
1 12

tio Application No For/DE 03/03273

		TOT/DE 03/032/3
	tion) DOCUMENTS CONSIDERED TO BE RELEVANT	
Category °	Citation of document, with indication, where appropriate, of the relevant passages	
A	US 5 307 671 A (AKASE YOSHIAKI) 3 May 1994 (1994-05-03) abstract	1,2
A	US 5 307 670 A (IMAI RYUICHIRO ET AL) 3 May 1994 (1994-05-03) abstract column 1, line 5 - line 18	1,2
	•	
•	· · · · · · · · · · · · · · · · · · ·	
		·
		·
	•	

## INTERNATIONAL SEARCH REPORT

Information on patent family members



Patent document cited in search report		Publication date	•	Patent family member(s)	Publication date
EP 0823622	A	11-02-1998	JP JP DE EP US	3449170 B2 10110649 A 69726656 D1 0823622 A2 5951617 A	22-09-2003 28-04-1998 22-01-2004 11-02-1998 14-09-1999
US 5809969	A	22-09-1998	US	5901684 A	11-05-1999
US 5287736	A	22-02-1994	JP JP JP	5149191 A 5157000 A 5296101 A	15-06-1993 22-06-1993 09-11-1993
US 5307671	A	03-05-1994	JP JP DE	4297843 A 4289428 A 4206801 A1	21-10-1992 14-10-1992 17-09-1992
US 5307670	A	03-05-1994	JP JP JP JP DE GB US	4265475 A 2017117 C 4171250 A 7051917 B 4135797 A1 2249839 A ,B 5426587 A	21-09-1992 19-02-1996 18-06-1992 05-06-1995 21-05-1992 20-05-1992 20-06-1995